



AF/2875/11

TRANSMITTAL OF APPEAL BRIEF (Small Entity)

Docket No.  
GSC-04502/03

In Re Application Of: Willoughby

Application No.	Filing Date	Examiner	Customer No.	Group Art Unit	Confirmation No.
10/603,753	06/25/2003	Sawhney	25006	2875	2152

Invention: FIBER OPTIC LIGHT WITH FRESNEL CONDENSER LENS

COMMISSIONER FOR PATENTS:

Transmitted herewith in ~~triplicate~~ is the Appeal Brief in this application, with respect to the Notice of Appeal filed on:

August 8, 2005

☒ Applicant claims small entity status. See 37 CFR 1.27

The fee for filing this Appeal Brief is: \$250.00

- ☒ A check in the amount of the fee is enclosed.
- ☐ The Director has already been authorized to charge fees in this application to a Deposit Account.
- ☒ The Director is hereby authorized to charge any fees which may be required, or credit any overpayment to Deposit Account No. 07-1180
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Dated: Oct. 10, 2005

Signature

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I hereby certify that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to "Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450" [37 CFR 1.8(a)] on

Oct. 10, 2005

(Date)

Signature of Person Mailing Correspondence

Sheryl L. Hammer

Typed or Printed Name of Person Mailing Correspondence

CC:



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE  
BOARD OF PATENT APPEALS AND INTERFERENCES

In re application of: Willoughby

Serial No.: 10/603,753

Group No.: 2875

Filed: June 25, 2003

Examiner: Sawhney

For: FIBER OPTIC LIGHT WITH FRESNEL CONDENSER LENS

**APPELLANT'S BRIEF UNDER 37 CFR §1.192**

Mail Stop Appeal Brief  
Commissioner for Patents  
PO Box 1450  
Alexandria, VA 22313-1450

Dear Sir:

**I. Real Party in Interest**

The real party and interest in this case is Charles T. Willoughby, Applicant and Appellant.

**II. Related Appeals and Interferences**

There are no appeals or interferences which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

**III. Status of Claims**

The present application was filed with 7 claims. Claim 6 was canceled by amendment in February 2005. Claims 1-5 and 7 are pending, rejected and under appeal. Claim 1 is the sole independent claim.

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**IV. Status of Amendments Filed Subsequent  
Final Rejection**

An after-final response was filed on July 5, 2005, in that Applicant requested the finality of the Office Action be removed. A subsequent Advisory Action denied this request.

**V. Summary of Claimed Subject Matter**

Independent claim 1 is directed to a head-mounted illuminator configured for use with a source of light, comprising a housing with a hollow interior having a light-receiving end and a light-projecting end; an optical fiber carrying light from the source of light into the interior of the housing through the light receiving end; a Fresnel lens mounted in the light-projecting end of the housing for receiving light from the optical fiber and projecting the light into a field of view, the Fresnel lens having a two sides, one with a set of grooves that face the interior of the housing; and a mechanism for mounting the housing to a wearer's head.. (Specification, page 2, lines 9-23).

**VI. Grounds of Objection/Rejection To Be Reviewed On Appeal**

A. The rejection of claims 1-4 and 7 under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 5,430,620 to Li et al. in view of U.S. Patent No. 4,428,031 to Mori.

B. The rejection of claim 5 under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 5,430,620 to Li et al. in view of U.S. Patent No. 4,428,031 to Mori (as applied to claim 1 above), and further in view of U.S. Patent No. 6,234,640 to Belfer.

**VII. Argument****A. Claims 1-4 and 7.**

Claims 1-4 and 7 stand rejected under 35 U.S.C. §103(a) over Mori ('031) in view of Li et al. ('620). Claim 1 now includes the limitation of a mechanism for mounting the illuminator housing to a wearer's head, a configuration which the Examiner calls "obvious" "for the benefit and advantage dynamic adjustment [sic] of the field of illumination." Appellant respectfully disagrees.

The invention of Mori resides in "an illumination device for illuminating the interior of a room comprising an optical wave guide for transmitting light rays and a convex Fresnel lens for refracting light rays emitted from an exit end of the optical wave guide." (Mori, Abstract). According to Mori, "a Fresnel lens having a desired shape and size can be manufactured from the base Fresnel lens. For example, supposing that the base Fresnel lens has been formed in the shape of a circular disk having a diameter of 30 cm, a circular shaped Fresnel lens having any diameter of less than 30 cm can be obtained by machining said base Fresnel lens, and a square or hexagon shaped Fresnel lens can be

obtained from the base Fresnel lens. It should be noted that, in such a case, the size of the square or hexagon Fresnel lens obtained is smaller than the imaginal square or hexagon which inscribe the circle having a diameter of 30 cm.” (Mori, col. 4, lines 38-50)

Since Mori discloses lens diameters on the order of 30 centimeters (about a foot), it would be clear to anyone of skill in the art that the assembly of Mori is intended for permanent installation in a room, and would never be head worn. If a proposed combination of the prior art would change the principle of operation of the prior art invention being modified, then the teachings of the references are not sufficient to render the claims *prima facie* obviousness. *In re Ratti*, 270 F.2d 810, 123 USPQ 349 (CCPA 1959). Moreover, if a proposed combination would render the prior art unsatisfactory for its intended purpose, then there is no suggestion or motivation to make the proposed modification. *In re Gordon*, 733 F.2d 900, 221 USPQ 1125 (Fed. Cir. 1984). The mere fact that references can be combined or modified does not render the resultant combination obvious unless the prior art also suggests the desirability of the combination. *In re Mills*, 916 F.2d 680, 16 USPQ2d 1430 (Fed. Cir. 1990).

#### **B. Claim 5.**

Claim 5 stands rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 5,430,620 to Li et al. in view of U.S. Patent No. 4,428,031 to Mori (as applied to claim 1), and further in view of U.S. Patent No. 6,234,640 to Belfer. Claim 5 includes the additional limitation of “the light-projecting end of the housing [being] conical in shape, and terminates with a diameter larger than that of the light-receiving end.” The Examiner concedes that neither Li nor Mori teach such a limitation, but argues that the proposed combination is obvious “for benefit and advantage of a large projection area for illumination.” However, a conclusion that the claimed subject matter is *prima facie* obvious must be supported by evidence, as shown by some objective teaching in the prior art or by knowledge generally available to one of ordinary skill in the art that would have led that individual to combine the relevant teachings of the references to arrive at the claimed invention. See *In re Fine*, 837 F.2d 1071, 1074, 5 USPQ2d 1596, 1598 (Fed. Cir. 1988). Rejections based on §103 must rest on a factual basis with these facts being interpreted without hindsight reconstruction of the invention from the prior art. The examiner may not, because of doubt that the invention is patentable, resort to speculation, unfounded

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assumption or hindsight reconstruction to supply deficiencies in the factual basis for the rejection. See In re Warner, 379 F.2d 1011,1017,154 USPQ 173, 177 (CCPA 1967), cert. denied, 389U.S. 1057 (1968).

In this case, the use of a conical housing has nothing to do with "a large projection area for illumination." Projection area is determined solely by the optics involved, and can be large or small in any shape housing, so long as the light beam is not interrupted. Since a cylindrical housing would be just as effective as a conical one in this regard, so there would be no motivation to modify Li or Mori. Accordingly, *prima facie* obvious has not been established.

### Conclusion

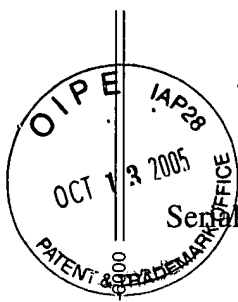
In conclusion, for the arguments of record and the reasons set forth above, all pending claims of the subject application continue to be in condition for allowance and Appellant seeks the Board's concurrence at this time.

Respectfully submitted,

By: \_\_\_\_\_

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Date: Oct. 10, 2005



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## APPENDIX A

### CLAIMS ON APPEAL

1. A head-mounted illuminator configured for use with a source of light, comprising:  
a housing with a hollow interior having a light-receiving end and a light-projecting end;  
an optical fiber carrying light from the source of light into the interior of the housing through the light receiving end;  
a Fresnel lens mounted in the light-projecting end of the housing for receiving light from the optical fiber and projecting the light into a field of view, the Fresnel lens having a two sides, one with a set of grooves that face the interior of the housing; and  
a mechanism for mounting the housing to a wearer's head.
2. The head-mounted illuminator of claim 1, wherein the light-projecting end of the housing may be movable forward and backward relative to the light-receiving end to adjust the beam diameter of the light projected into the field of view.
3. The head-mounted illuminator of claim 1, wherein the light-projecting end and the light-receiving end of the housing are connected with a threaded coupling, enabling the light-projecting end to be movable forward and backward relative to the light-receiving end to adjust the beam diameter of the light projected into the field of view.
4. The head-mounted illuminator of claim 1, wherein the Fresnel lens is made of acrylic.
5. The head-mounted illuminator of claim 1, wherein the light-projecting end of the housing is conical in shape, and terminates with a diameter larger than that of the light-receiving end.
7. The head-mounted illuminator of claim 1, wherein the mechanism allows for pivotally mounting the housing to a wearer's head.

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**APPENDIX B**

**EVIDENCE**

None.

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**APPENDIX C**

**RELATED PROCEEDINGS**

None.

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